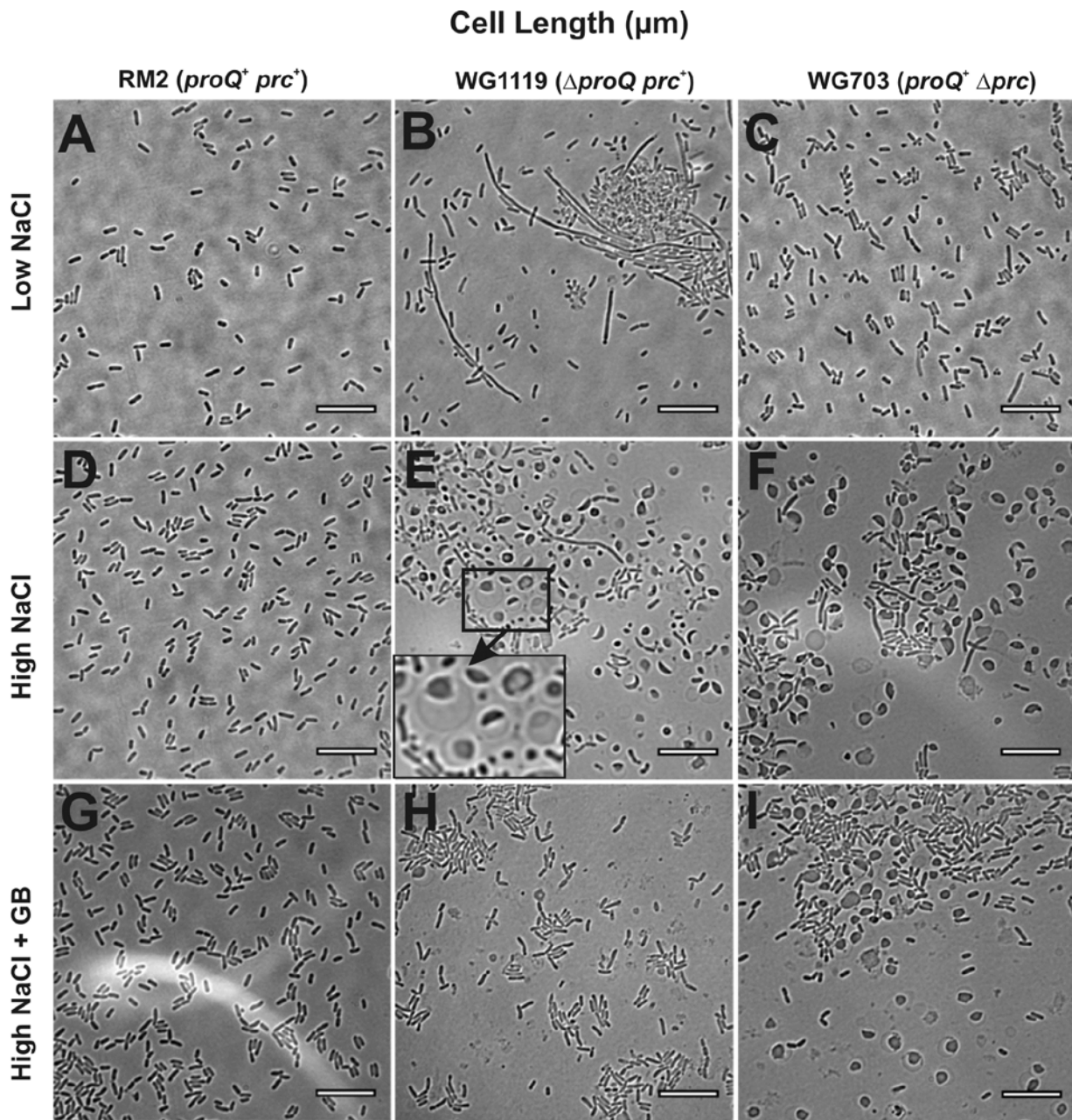


1 **Legends for Supplementary Figures**

2 **Supplementary Figure 1: Impacts of *proQ* and *prc* lesions on bacterial morphology** These  
3 images complement the ones shown in Figure 2. Bacteria were cultivated in MOPS medium to  
4 late exponential phase as described for transport assays (25) and visualized by light microscopy  
5 (see Materials and Methods). Representative micrographs are shown for strains RM2 (panels **A**,  
6 **D & G**), WG1119 (panels **B, E & H**) and WG703 (panels **C, F & I**) cultivated in  
7 unsupplemented medium (Low NaCl, panels **A, B & C**), NaCl-supplemented medium (High  
8 NaCl, panels **D, E & F**) or medium supplemented with both NaCl and glycine betaine (1 mM)  
9 (High NaCl + GB, panels **G, H & I**). Spherical cells with highly refractive, crescent-shaped  
10 internal structures are evident in panels **E, F & I** (particularly the inset to panel E). All scale  
11 bars correspond to 10  $\mu\text{m}$ .

12 **Supplementary Figure 2: Impacts of *proQ* and *prc* lesions on cell length** Bacteria were  
13 cultivated to late exponential phase in high salinity MOPS medium supplemented with glycine  
14 betaine (see legend to Supplementary Figure 1) as described for transport assays (25) and  
15 visualized by light microscopy (see Materials and Methods). Length distributions are shown for  
16 100 rod-shaped cells of strains RM2 (*circles*, *proQ*<sup>+</sup> *prc*<sup>+</sup>), WG1119 (*inverted triangles*, RM2  
17  $\Delta\textit{proQ856}::\textit{FRT}$ ) and WG703 (*squares*, RM2  $\Delta\textit{prc3}::\textit{kan}$ ). Subsequent experiments revealed  
18 that  $\Delta\textit{proQ856}::\textit{FRT}$  rendered the bacteria ProQ- and Prc-deficient (Fig. 4). For strain WG1119,  
19 3% of measured cells in cultures at low osmolality and 4% of measured cells in cultures at high  
20 osmolality were greater than 6  $\mu\text{m}$  in length. No measured cells in cultures of strain RM2 or  
21 WG703 at low or high osmolality were greater than 6  $\mu\text{m}$  in length.

1



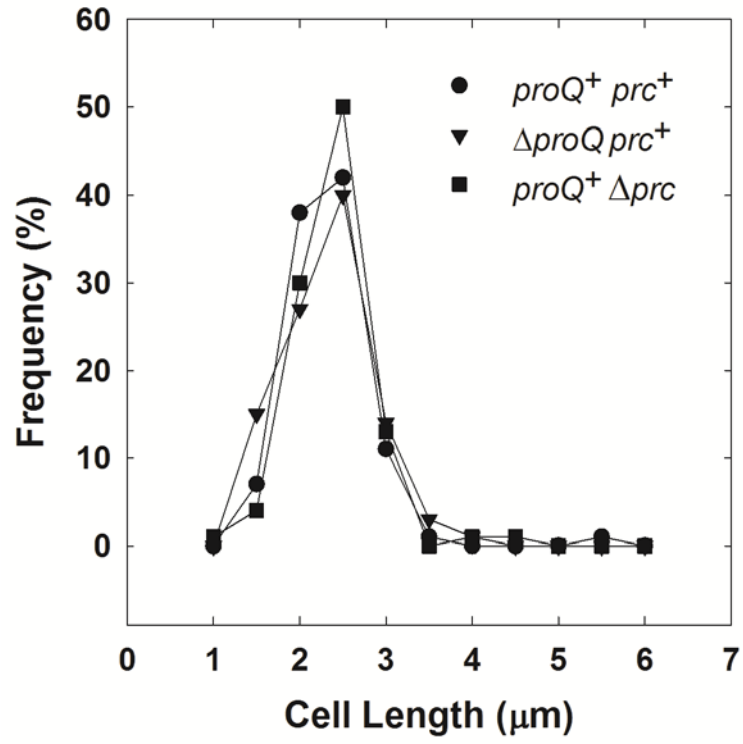
2

3

**Supplementary Figure 1**

4

1



2

3

4

5

**Supplementary Figure 2**